## U.S. Army Center for Health Promotion and Preventive Medicine



## General Facts About Tear Agent Chloroacetophenone and Chloropicrin in Chloroform (CNS)

218-44-1096

General

CNS is a formulation of chloroacetophenone (CN). CNS was formulated not so much as a tear agent but as a vomiting agent. CNS was an American chemical warfare materiel developed after WWI; it has a mixture of 23 percent chloroacetophenone (CN), 38.4 percent chloropicrin (PS), and 38.4 percent chloroform.

**Description** 

CNS is a clear liquid smelling like flypaper; it has an immediately strong irritating effect on the eyes and respiratory tract. CNS may cause severe nausea.

Overexposure Effects

CNS is an example of multiple-component mixtures developed to achieve desired dissemination characteristics. Its hazards exist for inhalation, ingestion, and skin and eye exposure. It produces nausea within a minute of inhalation by a moderately sensitive person. If inhaled for longer periods, vomiting, colic (severe abdominal pains and cramps), and diarrhea are to be expected in its victims. Persons who are exposed to very large quantities of the vapors or liquid concentrations may suffer these symptoms for weeks. CNS is a non-lethal choking agent. It will cause the victims to gasp for air (thus inhaling more CNS) while causing discomfort to the bronchial tubes and lung sacs. CNS vapors may go into solution with sweat, making it a skin irritant, especially the face. If allowed to penetrate the clothing, CNS will cause stinging under the armpits, elbows, knees, and the area around the crotch and buttocks. Skin rashes may result after prolonged exposures. Prolonged eye exposure would not be recommended.

Emergency and First Aid Procedures

Inhalation: remove the victim to fresh air <u>immediately</u>; perform artificial respiration if breathing has stopped; keep victim warm and at rest; seek medical attention immediately.

Eye Contact: wash eyes <u>immediately</u> with copious amounts of water, lifting the lower and upper lids occasionally; do not wear contact lenses when working with this chemical; seek medical attention <u>immediately</u>.

Skin Contact: wash the contaminated skin with soap or mild detergent and water <u>immediately</u>; remove the contaminated clothing <u>immediately</u>, and wash the skin using soap or mild detergent and water; seek medical attention <u>immediately</u> when there are chemical burns or evidence of skin irritation.

Ingestion: induce vomiting by having victim touch the back of his throat with finger or by giving victim syrup of ipecac as directed; do not induce vomiting if victim is unconscious; seek medical attention <u>immediately</u>.